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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,549	04/09/2007	Gareth Wakefield	K0181.70025US00	8921

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WOLF GREENFIELD & SACKS, P.C.
600 ATLANTIC AVENUE
BOSTON, MA 02210-2206

EXAMINER

CORNET, JEAN P

ART UNIT	PAPER NUMBER
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1614

MAIL DATE	DELIVERY MODE
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08/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,549	Applicant(s) WAKEFIELD ET AL.	
	Examiner JEAN CORNET	Art Unit 1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) 8-14, 21-25 and 27-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/28/2006, 10/26/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 1 and 15-20 in the reply filed on 06/04/09 is acknowledged.

.Applicant's election with traverse of species election requirement in the reply filed on 06/04/2009 is acknowledged. The traversal is on the ground(s) that the individual metal oxide species specified in claims 3 and 4 do not lack unity of invention under PCT Rule 13.1, because they share a special technical feature, i.e. they possess adjacent oxidation states, which are suitable to allow them to be able to act as free radical scavengers. This is not found persuasive because although they possess adjacent oxidation states, they are patentable distinct with mutually exclusive characteristics chemical. Claims 8-14, 21-25 and 27-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Claims 2-7 read on the elected species and therefore are included in Group II. Claims 1-7, 15-20 are currently under examination.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silva et al. (US 6,664,366) cited in the 892 form in view of Gers-Barlag et al. (US 5,788,952) cited in the IDS.

As to claims 1, 3-7 and 15-20; Silva teaches a multilayer articles composition comprises a substrate layer comprising at least on thermoplastic polymer, thermoset polymer, and

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at least one coating layer (col. 32, lines 38-42). The coating layer and any optional intermediate layers such as second layers may also comprise art recognized additives including auxiliary UV screener, where the auxiliary UV screener includes inorganic nano-size materials with particle size of less than 100 nm (col. 33, lines 35-53) in the amount of 0.05% to 10 % (col. 33, lines 54-57) for the application of photographic film (col. 38, line 39) and foamed articles (col. 38, line 41)./ Foam articles are examples of three dimensional articles as per Applicant's specification page 6, line 11-13).

Applicant's claims differ in that because they require oxide of manganese.

However, It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the art recognized nano-size materials with particle size of less than 100 nm as a UV screener with manganese to achieve substantially the same effect when Silva was taken in view of Gers-Barlag because Gers-Barlag teaches a dermatological and cosmetic sunscreen formulation comprises inorganic pigment (col. 2, lines 55-58), where the inorganic pigments such as manganese (col. 1, lines 60-64), based on metal oxides such as manganese oxide (col. 3, lines 21-23) have good sun screen action and are free radical scavengers (col. 1, lines 56-67), Thus remedies the deficiency of Silva.

As to claim 2, Manganese oxidation state inherently possesses adjacent oxidation states that do not differ by more than 2 eV.

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Because of the supporting activity of those inorganic pigments, the scope of the claims is embraced by the teaching of the cited reference.

One would have been motivated to do so with a reasonable expectation of success because Gers-Barlag's teaching clearly suggests that the substitution would have been equivalent. The techniques and skills required for making such substitution is conventional knowledge or well within the skills of ordinary artisan as evidenced by Silva.

All the critical elements required by the claims are obvious over the well taught and thus the claimed subject matter is not patentably distinct over the prior art of the invention.

Conclusion

3. No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN CORNET whose telephone number is (571)270-7669. The examiner can normally be reached on Monday-Thursday 7.00am-5.30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JC/

/Ardin Marschel/
Supervisory Patent Examiner, Art Unit 1614